TIP PROJECT: B-3706

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3706	EC-1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION

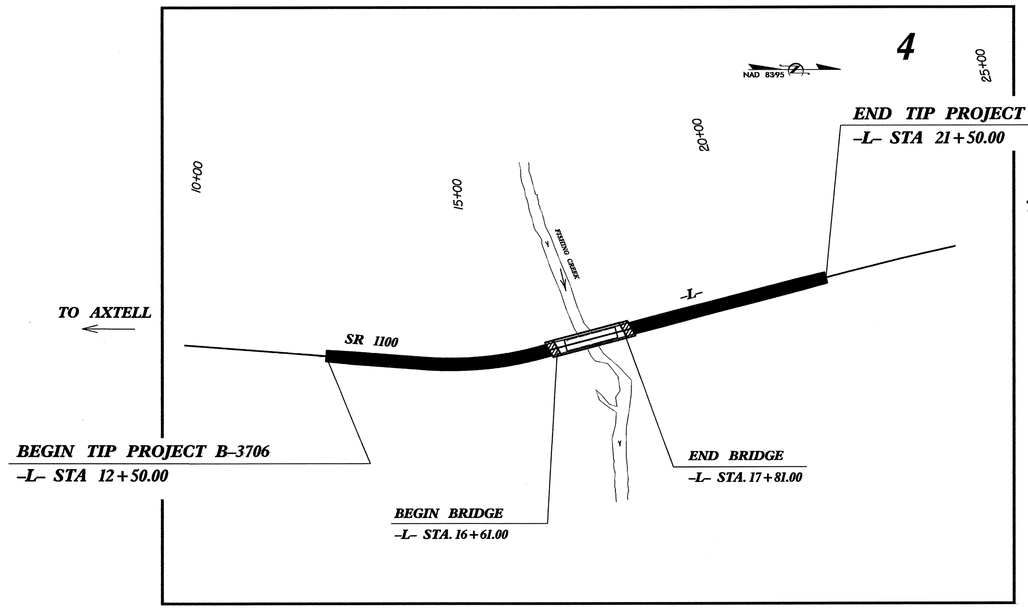
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

WARREN COUNTY

LOCATION: Bridge No. 20 on SR 1100 (Manson–Axtell Road) over Fishing Creek

TYPE OF WORK: Grading, Drainage, Paving and Structure



EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.01	Riser Basin	
	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-B	
	Wattle	
1634.01	Temporary Rock Sediment Dam Type-A	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
1630.04	Stilling Basin	
1630.06	Special Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.

ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT

Refer To E. C. Special Provisions for Special Considerations.

GRAPHIC SCALE

0
PLANS
0
PROFILE (HORIZONTAL)
0
PROFILE (VERTICAL)

ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

Prepared In the Office of:

ROADSIDE ENVIRONMENTAL UNIT
1 South Wilmington St.
Raleigh, NC 27611

2006 STANDARD SPECIFICATIONS

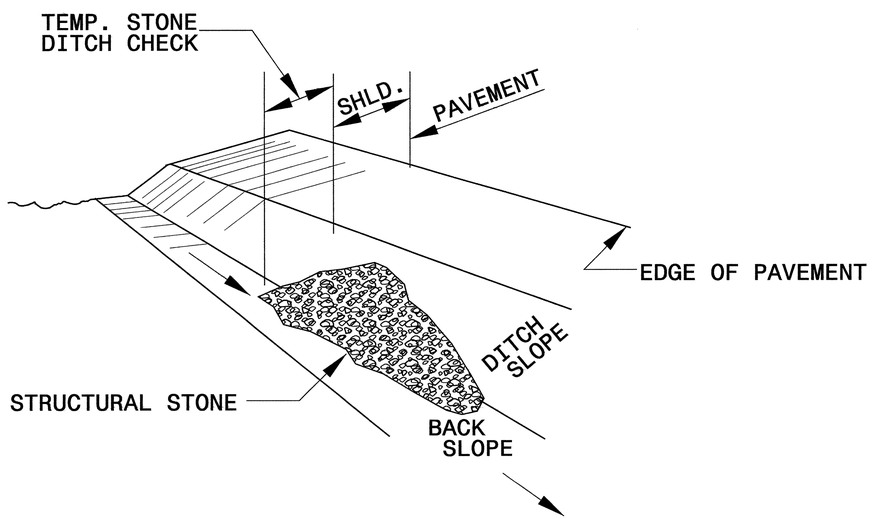
Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"– Roadway Design Unit – N. C. Department of Transportation – Raleigh, N. C., dated July 18, 2006 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

1605.01 Temporary Silt Fence
1606.01 Special Sediment Control Fence
1607.01 Gravel Construction Entrance
1622.01 Temporary Berms and Slope Drains
1630.03 Temporary Silt Ditch
1630.05 Temporary Diversion
1632.03 Rock Inlet Sediment Trap Type C
1633.01 Temporary Rock Silt Check Type A

PROJECT REFERENCE NO.	SHEET NO.
B-3706	EC-2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

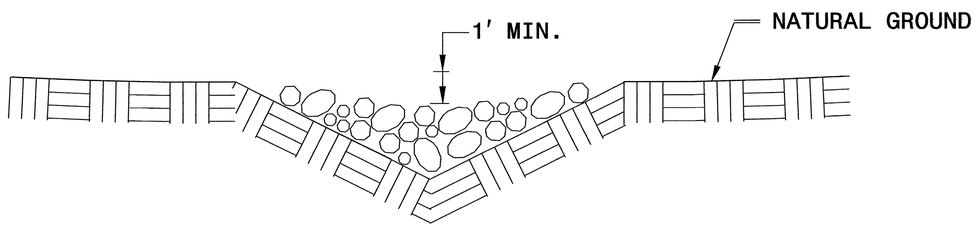


ISOMETRIC VIEW

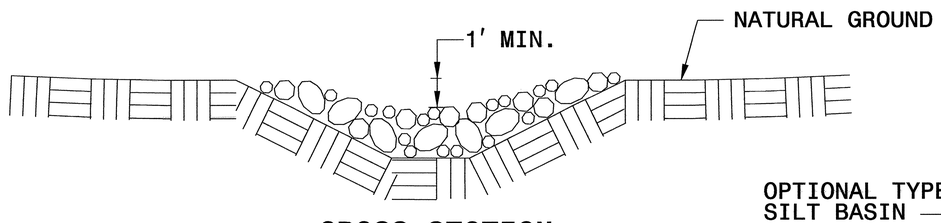
NOTES:

USE CLASS 'B' EROSION CONTROL STONE FOR STRUCTURAL STONE.

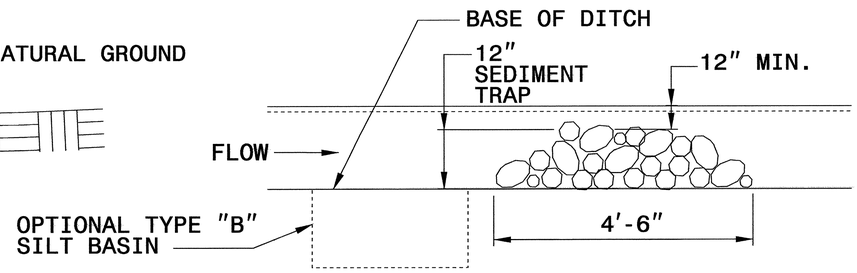
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



CROSS SECTION VEE DITCH



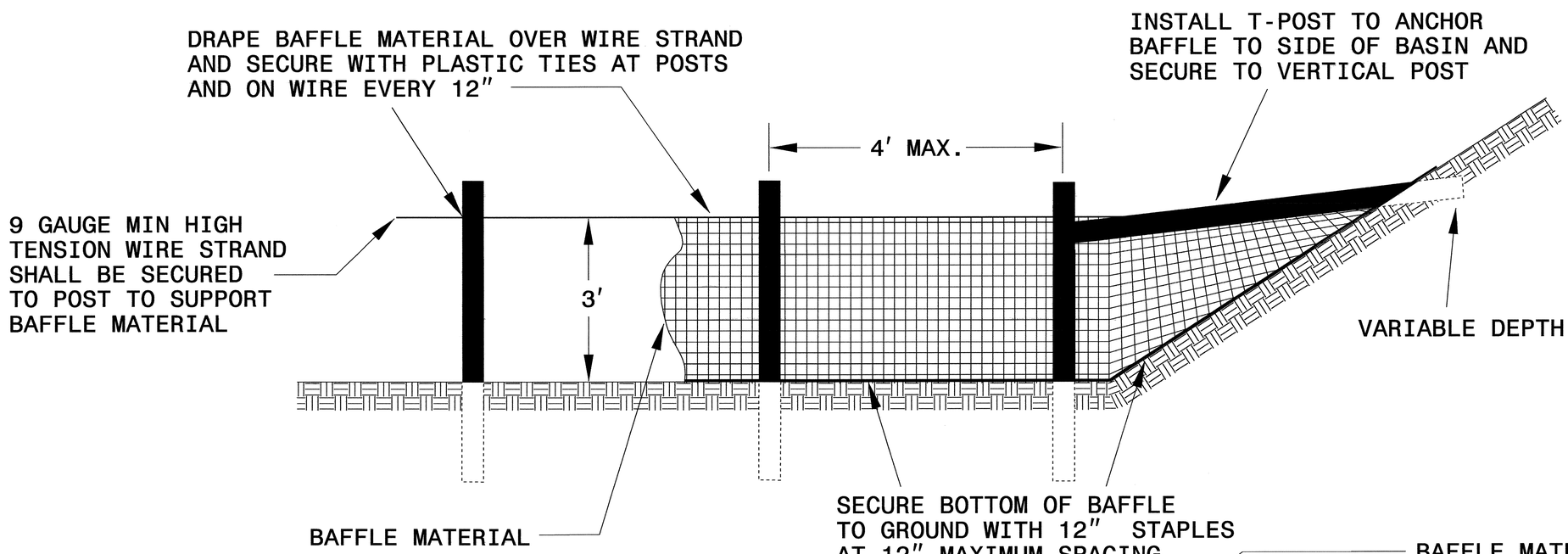
CROSS SECTION TRAPEZOIDAL DITCH

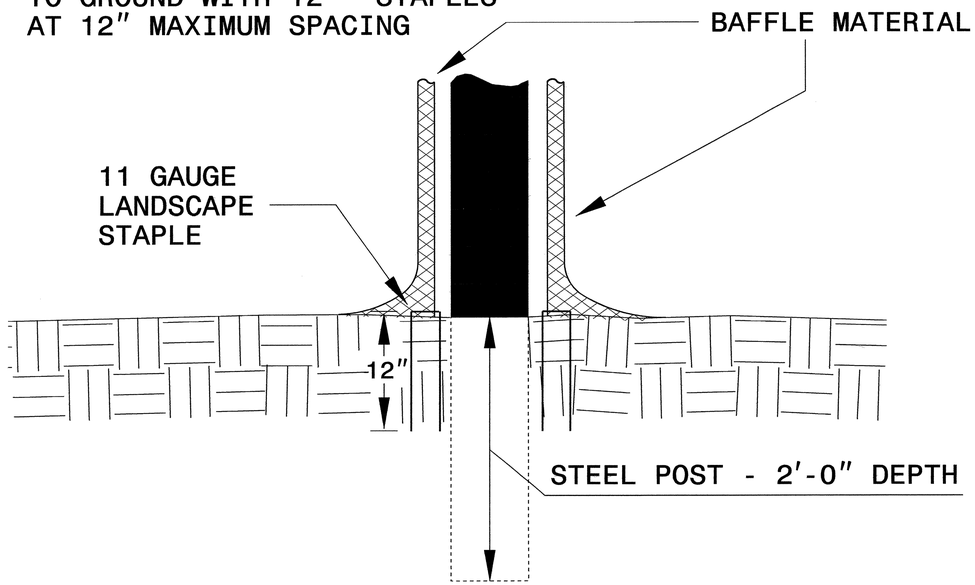


ELEVATION VIEW

PROJECT REFERENCE NO.	SHEET NO.
B-3706	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER BAFFLE DETAIL



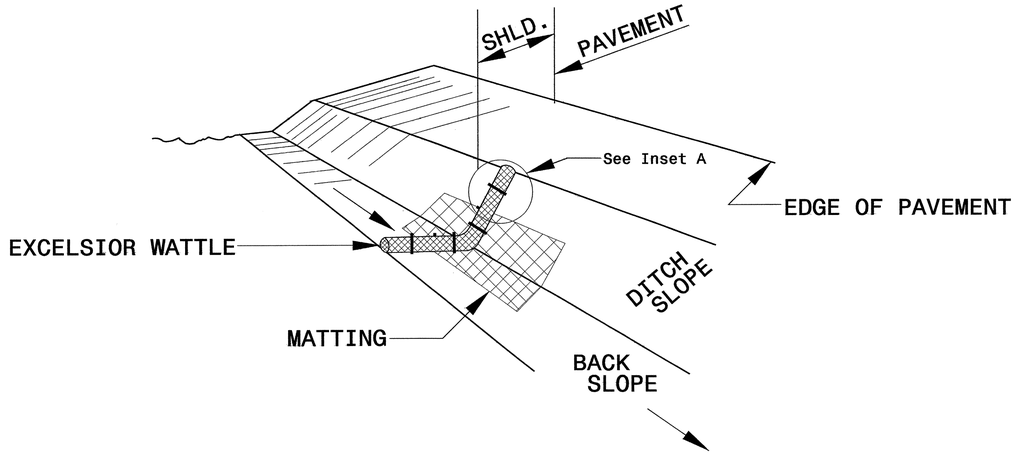


BAFFLE MATERIAL SHALL BE SECURED TO THE BOTTOM AND SIDES OF BASIN USING 12″ LANDSCAPE STAPLES

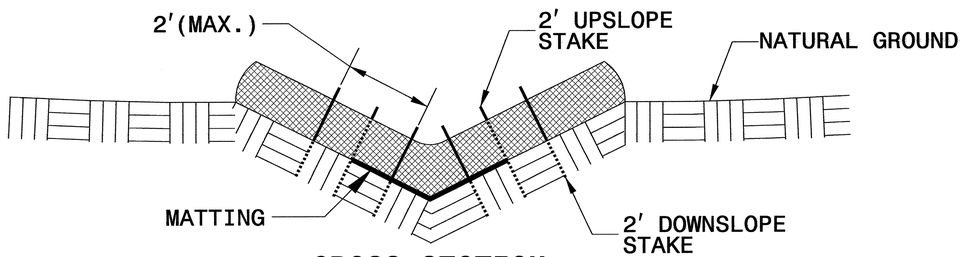
NOTE: INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT DAMS AT DRAINAGE OUTLETS WITH A SPACING OF ¼ THE BASIN LENGTH. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF 1/3 THE BASIN LENGTH.

PROJECT REFERENCE NO.	SHEET NO.
B-3706	EC-2B
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

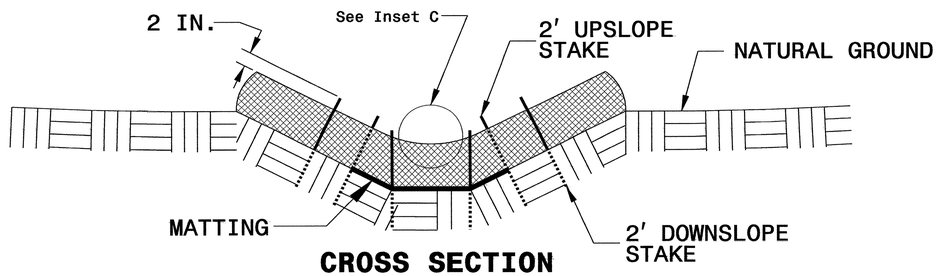
WATTLE WITH POLYACRYLAMIDE DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. CROSS SECTION.

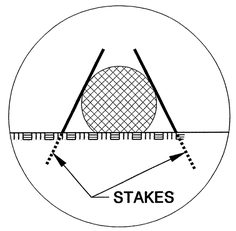
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

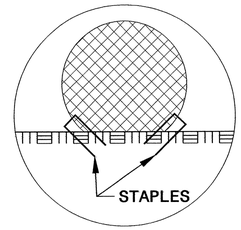
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

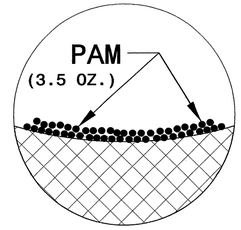
INITIALLY APPLY 3.5 OUNCES OF ANIONIC OR NEUTRALLY CHARGED POLYACRYLAMIDE (PAM) OVER WATTLE WHERE WATER WILL FLOW AND AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.25 IN.



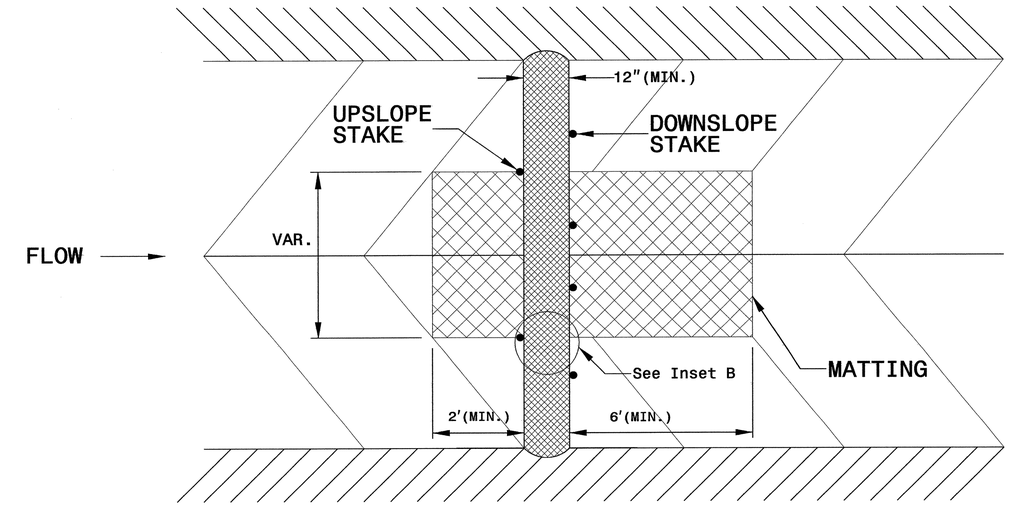
INSET A



INSET B



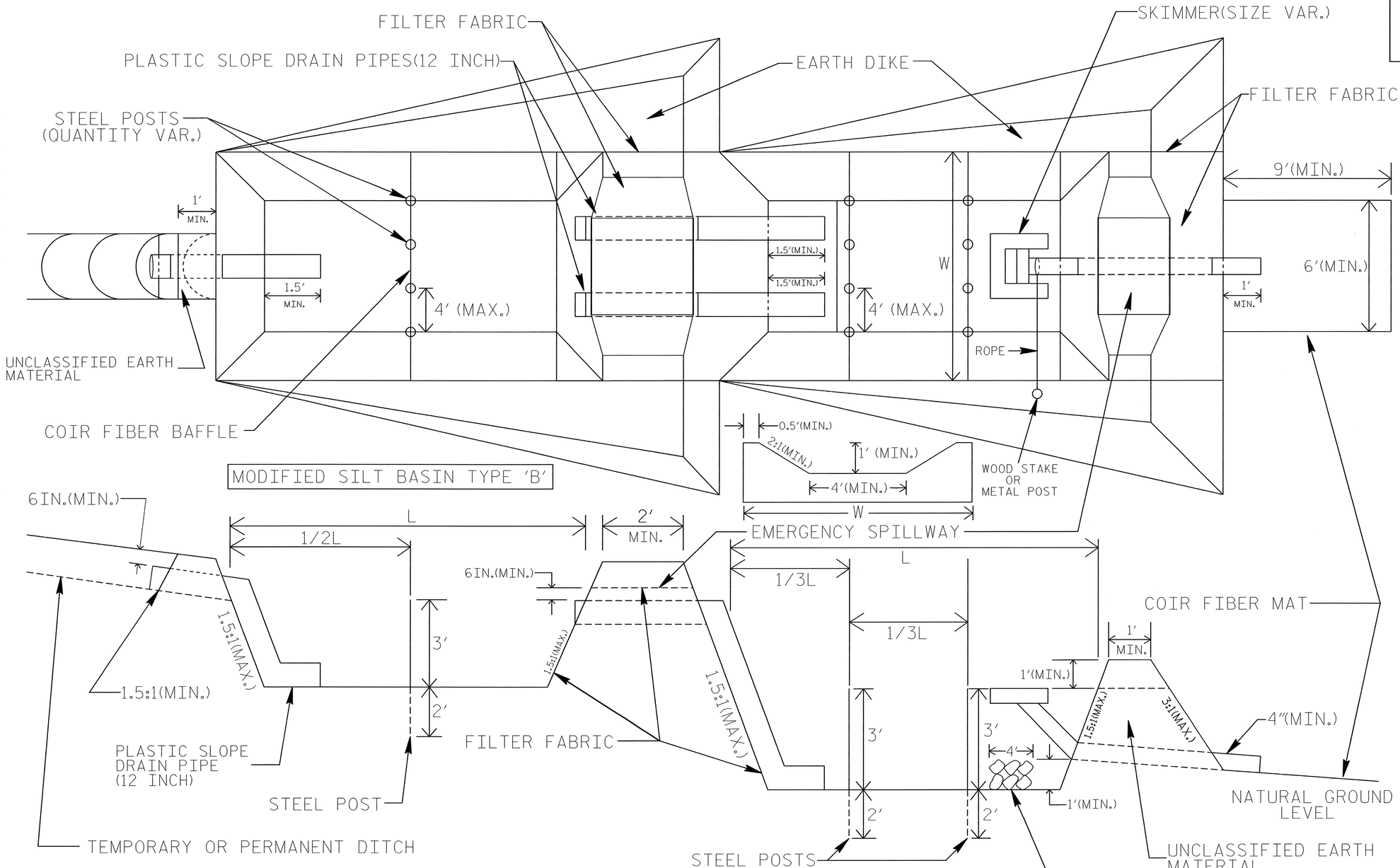
INSET C

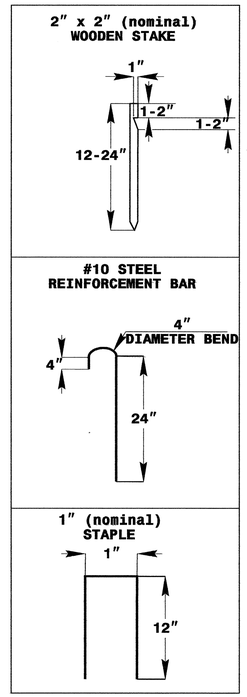


TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
B-3706	EC-2C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TIERED SKIMMER BASIN DETAIL





COIR FIBER MAT ANCHOR OPTIONS

NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR SIDESLOPES OF BASINS.
2. LIMIT HEIGHT OF EARTH DIKES TO 5 FT.
3. ADDITIONAL MODIFIED SILT BASINS TYPE 'B' MAY BE NEEDED DEPENDING ON SLOPE.
4. THE MINIMUM BASIN WIDTHS SHALL BE 9 FT.
5. DETERMINE EMERGENCY SPILLWAY LENGTHS (FT.) USING Q/0.8, WHERE Q IS FLOW RATE (CFS) INTO UPPER BASIN.

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
B-3706	EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	13+00	15+00	RT	170
				SUBTOTAL	170
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					1860
				TOTAL	2030
				SAY	2050

PERMANENT SOIL REINFORCEMENT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L-	13+00	15+00	LT	170
4	-L-	20+00	21+00	LT	140
4	-L-	20+50	21+00	RT	70
			SUBTOTAL		380
	ADDITIONAL PSRM TO BE INSTALLED				35
			TOTAL		415
			SAY		450

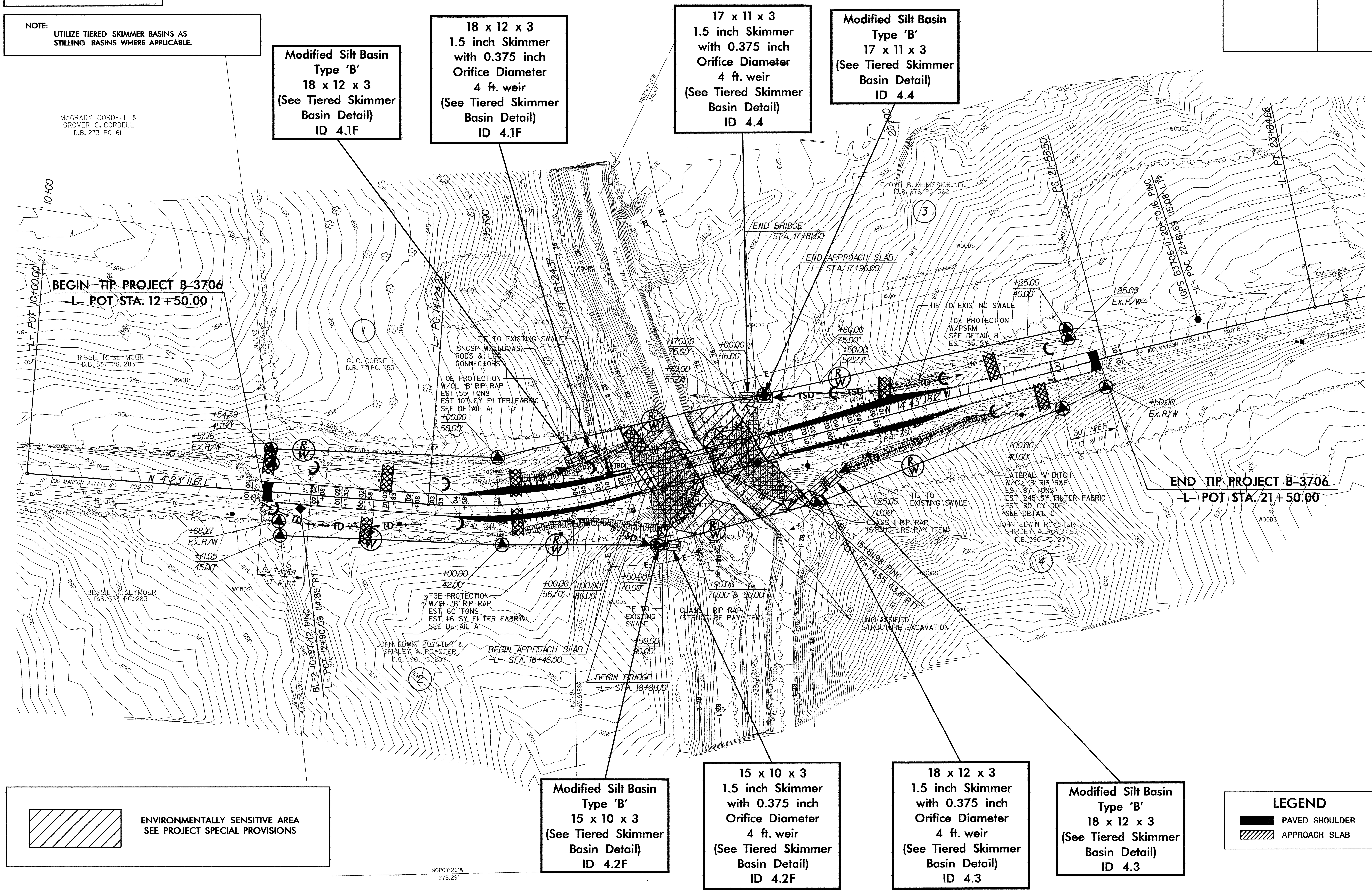
PROJECT REFERENCE NO.	SHEET NO.
B-3706	EC-04/CONST.04
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 04

NOTE:
UTILIZE TIERED SKIMMER BASINS AS STILLING BASINS WHERE APPLICABLE.



NAD 83/95
Modified Silt Basin Type 'B' 18 x 12 x 3 (See Tiered Skimmer Basin Detail) ID 4.1F
18 x 12 x 3 1.5 inch Skimmer with 0.375 inch Orifice Diameter 4 ft. weir (See Tiered Skimmer Basin Detail) ID 4.1F
17 x 11 x 3 1.5 inch Skimmer with 0.375 inch Orifice Diameter 4 ft. weir (See Tiered Skimmer Basin Detail) ID 4.4
Modified Silt Basin Type 'B' 17 x 11 x 3 (See Tiered Skimmer Basin Detail) ID 4.4
McGRADY CORDELL & GROVER C. CORDELL D.B. 273 PG. 61
BEGIN TIP PROJECT B-3706 -L- POT STA. 12+50.00
END TIP PROJECT B-3706 -L- POT STA. 21+50.00
BESSIE R. SEYMOUR D.B. 337 PG. 283
G. C. CORDELL D.B. 77 PG. 453
FLOYD B. McKISSICK, JR. D.B. 676 PG. 362
JOHN EDWIN ROYSTER & SHIRLEY A. ROYSTER D.B. 390 PG. 207
SR 1100 MANSON-AXTELL RD
N 4°23' 11.6" E
N 4°43' 18.2" W
FISHING CREEK
END BRIDGE -L- STA. 17+81.00
END APPROACH SLAB -L- STA. 17+96.00
BEGIN APPROACH SLAB -L- STA. 16+46.00
BEGIN BRIDGE -L- STA. 16+61.00
TIE TO EXISTING SWALE
15" CSP W/ ELBOWS, RODS & LUG CONNECTORS
TOE PROTECTION W/CL 'B' RIP RAP EST 55 TONS EST 107 SY FILTER FABRIC SEE DETAIL A
TOE PROTECTION W/PSRM SEE DETAIL B EST 35 SY
TOE PROTECTION W/CL 'B' RIP RAP EST 60 TONS EST 116 SY FILTER FABRIC SEE DETAIL A
LATERAL 'V' DITCH W/CL 'B' RIP RAP EST 87 TONS EST 245 SY FILTER FABRIC EST 80 CY DDE SEE DETAIL C
CLASS II RIP RAP (STRUCTURE PAY ITEM)
UNCLASSIFIED STRUCTURE EXCAVATION
TIE TO EXISTING SWALE
WOODS
Modified Silt Basin Type 'B' 15 x 10 x 3 (See Tiered Skimmer Basin Detail) ID 4.2F
15 x 10 x 3 1.5 inch Skimmer with 0.375 inch Orifice Diameter 4 ft. weir (See Tiered Skimmer Basin Detail) ID 4.2F
18 x 12 x 3 1.5 inch Skimmer with 0.375 inch Orifice Diameter 4 ft. weir (See Tiered Skimmer Basin Detail) ID 4.3
Modified Silt Basin Type 'B' 18 x 12 x 3 (See Tiered Skimmer Basin Detail) ID 4.3

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

LEGEND

- PAVED SHOULDER
- APPROACH SLAB

PROJECT REFERENCE NO.	SHEET NO.
B-3706	EC-05/CONST.04
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS

NAD 83/95

NOTE:
UTILIZE TIERED SKIMMER BASINS AS STILLING BASINS WHERE APPLICABLE.

Modified Silt Basin Type 'B' 18 x 12 x 3 (See Tiered Skimmer Basin Detail) ID 4.1F

18 x 12 x 3 1.5 inch Skimmer with 0.375 inch Orifice Diameter 4 ft. weir (See Tiered Skimmer Basin Detail) ID 4.1F

17 x 11 x 3 1.5 inch Skimmer with 0.375 inch Orifice Diameter 4 ft. weir (See Tiered Skimmer Basin Detail) ID 4.4

Modified Silt Basin Type 'B' 17 x 11 x 3 (See Tiered Skimmer Basin Detail) ID 4.4

McGRADY CORDELL & GROVER C. CORDELL D.B. 273 PG. 61

BESSIE R. SEYMOUR D.B. 337 PG. 283

G. C. CORDELL D.B. 771PG. 453

FLOYD B. McKISSICK, JR. D.B. 676 PG. 362

JOHN EDWIN ROYSTER & SHIRLEY A. ROYSTER D.B. 390 PG. 207

WOODS

10+00

15+00

20+00

-L- POT 10+00.00

BEGIN TIP PROJECT B-3706
-L- POT STA. 12+50.00

-L- PC 14+24.37

-L- PT 16+24.37

BEGIN SBO 15

FISHING CREEK

END BRIDGE -L- STA. 17+81.00

END APPROACH SLAB -L- STA. 17+96.00

-L- PC 21+58.50

-L- PT 23+84.68

15' WATERLINE EASEMENT

12.5' WATERLINE EASEMENT

TIE TO EXISTING SWALE

15" CSP W/ELBOWS, RODS & LOC CONNECTORS

TOE PROTECTION W/CL 'B' RIP RAP EST 55 TONS EST 107 SY FILTER FABRIC SEE DETAIL A

TOE PROTECTION W/PSRM SEE DETAIL B EST 35 SY

TOE PROTECTION W/CL 'B' RIP RAP EST 60 TONS EST 116 SY FILTER FABRIC SEE DETAIL A

TIE TO EXISTING SWALE

CLASS II RIP RAP (STRUCTURE PAY ITEM)

UNCLASSIFIED STRUCTURE EXCAVATION

LATERAL 'V' DITCH W/CL 'B' RIP RAP EST 87 TONS EST 245 SY FILTER FABRIC EST 80 CY DDE SEE DETAIL C

SR 1100 MANSON-AXTELL RD 20.0' BST

N 4°23'11.6" E

N 14°43'18.2" W

GPS B3706-11-20+70.91 PINC

GPS B3706-11-19+63.15 (10.08' LT) -L- POC 22+08.08

BL-2 10+97.72 PINC -L- POT 12+90.09 (14.89' RT)

BL-3 15+81.98 PINC -L- POT 17+14.55 (13.11' RT)

END TIP PROJECT B-3706
-L- POT STA. 21+50.00

BEGIN APPROACH SLAB -L- STA. 16+46.00

BEGIN BRIDGE -L- STA. 16+61.00

S83°53'54"W 317.51'

S83°53'54"W 382.12'

N01°07'26"W 275.29'

Modified Silt Basin Type 'B' 15 x 10 x 3 (See Tiered Skimmer Basin Detail) ID 4.2F

15 x 10 x 3 1.5 inch Skimmer with 0.375 inch Orifice Diameter 4 ft. weir (See Tiered Skimmer Basin Detail) ID 4.2F

18 x 12 x 3 1.5 inch Skimmer with 0.375 inch Orifice Diameter 4 ft. weir (See Tiered Skimmer Basin Detail) ID 4.3

Modified Silt Basin Type 'B' 18 x 12 x 3 (See Tiered Skimmer Basin Detail) ID 4.3

LEGEND
- PAVED SHOULDER
- APPROACH SLAB